



COCS 1437 Programming Fundamentals II

COURSE SYLLABUS: Spring 2021

INSTRUCTOR INFORMATION

Instructor: Mutlu Mete, Ph.D., Associate Professor of Computer Science
Office Location: Jour 218
Office Hours: TBA
Office Phone: 903-886-5497
Office Fax: 903-886-5165
University Email Address: Mutlu.Mete@tamuc.edu
Preferred Form of Communication: Email
Communication Response Time: One business day

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook: **NONE REQUIRED**

You can use any text book of your choice for reference material for this class or look up information about features of the C++ language on the internet.

Additional information is available under the Doc Sharing tab in D2L for this course. A lot of the material is related to the text book: C++ Programming: from Problem Analysis to Program Design 5th edition by D.S. Malik. However you do not need to buy book to make use of the information/notes created by an instructor who taught this course in previous semesters.

For additional resources for learning C++, click on Related Web Links.
Some particularly recommended sites for compiler information, tutorials, and general information.

<http://www.cprogramming.com/>

<http://www.cplusplus.com/>

<http://msdn.microsoft.com/en-us/visualc/default.aspx>

The syllabus/schedule are subject to change.

Software: C++ compiler of your choice. For instance, Windows users might consider Bloodshed Dev-C++ or MS Visual Studio; Xcode for Mac OS users; GCC/G++ for Linux users.

Course Description

Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. Prerequisites: CSCI 151 or COSC 1436

Student Learning Outcomes

1. Understand the basic elements of a computer program including documentation, data declaration and procedural operations.
2. Edit, translate and execute a computer program.
3. Write programs to input data from the keyboard or file and output to the console or file.
4. Apply control structures to alter the sequential flow of execution of program statements including selection and iteration structures.
5. Create user-defined functions; develop programs consisting of multiple functions, master function parameter passing, and the scope and lifetime of an identifier.
6. Define and manipulate arrays including searching, sorting and basic operations on lists implemented as arrays.
7. Create and access structures composed of heterogeneous items.
8. Design and code a class and then develop applications that utilize user-defined classes.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Students should be able to use C++ compiler.

Instructional Methods

This is a web-enhanced course (using some of the capabilities of myLeo Online but not set up as a self-directed online course. Instruction will be face-to-face. Assignments and course notes will be available on line. Feedback on assignments will also be available on line.

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Student Responsibilities or Tips for Success in the Course

“All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” (See Student’s Guide Handbook, Policies and Procedures, Conduct). Talking and other activities that distract/disturb others in the class would not be tolerated. Instructor holds the right to ask you leave the classroom anytime based on any of disturbing attitude. Each student should sign the sign-sheet if asked by instructor. Late student may not be allowed to participate the lecture.

Assignments and quizzes will be announced on myLeoOnline. No makeup quizzes or assignments.

GRADING

Final grades in this course will be based on the following scale:

GRADING POLICY:

A: 100%- 90%

B: 89% - 80%

C: 79% - 70%

D: 69% - 60%

F: 59 % - 0%

Assessments

Basis for Evaluation:

Assignments 20%

Test-1 25%

Test-2 25%

Final 30%

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

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LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

Interaction with Instructor Statement

You can come to my office (JOUR218) at any time during office hours regarding any question about any topic, including the questions about this course. I can share my industry and research experiences with you. Other than face-to-face and classroom communications, the primary mode of asynchronous communication is email. My email address is mutlu.mete@tamuc.edu. Usually I email you using a tool in myLeoOnline, where I cannot see/edit your email address. The emails I send through the myLeoOnline go the email address you associated with myLeo system. It could be your @leo.tamuc.edu or other email address from other domains you selected (gmail, yahoo,

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outlook, etc.). In the first week of semester, I will email you and ensure that you receive this email to establish an electronic communication between you and me. I usually response students' emails in 24 hours. Please wait 24 hours to remind the issue again in the emails. My office number is 903-886-5497; however, the least preferred way of communication is phone calls because of untraceable nature of the actions. If need be, I can give you a phone call appointment to discuss a course issue.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Credit will be given for ONLY those exams, programs, and/or projects turned in no later than the deadline as announced by the instructor of this class, unless prior arrangement has been made with the instructor. Late programs / projects / assignments do not gain partial credit. Assignments and projects will be posted in university's myLeoOnline communication system. Detailed information will be provided by the instructor. Students also should turn in their assignments through myLeoOnline portal. Each student is responsible for the content/instructions of email communications. It is highly recommended that you set notification setting in D2L.

You should do your own work on exams/projects and for computer assignments. Copying another student's work is not acceptable. Any indication of cheating and/or plagiarism on an exam/assignment/project will be an automatic 0 (zero) for the exam/assignment/project for all students involved. Yet, based on cheating and plagiarism activity in any section of class, instructor holds the right to give F grade to the identified student(s). Regarding codes in assignments / projects, you may be required to explain the code you submitted. In case of discursive explanation, the instructor holds the right to lower your grade.

During the online tests, you will not be able to move backwards through pages. It means once you answer a question, you will not able to see it again. Instructor can use plagiarism software during the tests.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx).
<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

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Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:

<https://www.britannica.com/topic/netiquette>

TAMUC Attendance

Attendance is mandatory. Student will be allowed to enter to the classroom within 3 minutes after the lecture starts. A roster sheet will be signed for each class meeting. Missing three or four class meetings without a written excuse degrades course grade by one, such as A to B, or B to C. Missing five or more class meetings without a written excuse degrades course grade by two, such as A to C, or B to D.

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Geer Library- Room 162

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Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

COURSE OUTLINE / CALENDAR

Tentative Topics by Week

Week	TOPIC
1/11/2021	Introduction to software development, Design Steps, Compiler Setup, debugging settings.
1/18/2021	Introduction to variables and data types, input/output operators in main functions.
1/25/2021	Decision making, string comparison, nested control structures, logical operators, == vs =

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2/1/2021	Loop Control - 1: For, while, do-while loops, infinite loops. Random number generator
2/8/2021	Loop Control - 2: Details on loop control, break and continue keywords.
2/15/2021	File Operations: text files, binary files. How to read from and write into files.
2/22/2021	Functions: Modular programming, pass by reference, pass by value, memory allocation details of functions,
3/1/2021	Data Types Memory Size, Scope of variables, static variables, function overloading, predefined (system) functions, default arguments
3/8/2021	Single dimension arrays, array applications: Search in sorted and unsorted data
3/15/2021	Multiple dimension arrays, initialization, search in 2D arrays, row/column operations
3/22/2021	Structs, memory status of structs, arrays in structs, functions with structs.
3/29/2021	Structs, structs in structs, sorting structs, sorting structs in an array.
4/5/2021	Pointers data type, pointers with structs, pointers as array variable, pointer arithmetic
4/12/2021	Classes - 1: Introduction to classes, objects, membership, access operators
4/19/2021	Classes - 2: Inheritance, Static and dynamic function overloading, polymorphism
4/26/2021	Final Test

~~HAVE A VERY SUCCESSFUL SEMESTER~~

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